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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/671,688      | 09/29/2003  | Satoshi Abe          | P24336              | 7419             |

7055 7590 03/03/2006

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| EXAMINER |
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TENTONI, LEO B

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1732

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/671,688

Applicant(s)

ABE ET AL.

Examiner

Leo B. Tentoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12142005;12232005</u> . | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

1. The objection to the disclosure, the rejection of claim 8 under 35 USC § 112, second paragraph, the rejection of claims 1 and 4-8 under 35 USC § 103(a) and the rejection of claims 1 and 4-8 under the judicially-created doctrine of obviousness-type double patenting set forth in the previous Office Action (mailed on 27 September 2005) are withdrawn in favor of the new grounds of rejection set forth as follows.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that

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was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 4-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamalabad et al (U.S. Patent 6,682,684 B1).

Jamalabad et al (see the entire document, in particular, col. 6, line 61 to col. 7, line 4; col. 7, line 34 to col. 8, line 44) teach a process of making a three-dimensional object as set forth in the instant claims (while the support structure of Jamalabad et al may be of a different material, the instant claims encompass such an aspect). Jamalabad et al do not explicitly teach repeating the step of removing an excess portion; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made principally because Jamalabad et al teach repeating the steps of forming a powder layer and irradiating the powder layer, which steps result in the formation of solidified layers to form a block and also result in formation of an excess portion (e.g., note Figure 5) and this excess portion is removed during formation of the layers. Jamalabad et al do not explicitly teach formation of a concave portion on a lower part of a block or a

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declined upper surface of a concave portion; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made principally in order to produce a sintered block having a desired configuration (e.g., the particular application or use of the product would determine its configuration or shape).

5. Claims 1, 4-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi et al (JP 2002-115004 A).

Higashi et al (see the entire document, in particular, the English-language abstract; Figures; note that this document is equivalent to DE 10148967 A1 and U.S. Patent 6,657,155 B2) teach a process of making a three-dimensional object as set forth in the instant claims. Higashi et al do not explicitly teach repeating the step of removing an excess portion; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made principally because Higashi et al teach repeating the steps of forming a powder layer and irradiating the powder layer, which steps result in the formation of solidified layers to form a block and also result in formation of an excess portion and this excess portion is removed during formation of the layers. Higashi et al do not explicitly teach formation of a concave portion on a lower part of a block or a declined upper surface of a concave portion;

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however, this would have been obvious to one of ordinary skill in the art at the time the invention was made principally in order to produce a sintered block having a desired configuration (e.g., the particular application or use of the product would determine its configuration or shape).

6. Claims 7, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Jamalabad et al (U.S. Patent 6,682,684 B1) or Higashi et al (JP 2002-115004 A) as applied to claims 1, 4-6 and 9-12 above, and further in view of Exner et al (DE 19953000 A1).

Exner et al (see the entire document, in particular, the English-language abstract; Figures) teach a process of making a three-dimensional object including irradiating an optical beam along an outline and using a mask, and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of either Jamalabad et al or Higashi et al principally in order to produce a desired three-dimensional object.

#### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not

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identical, but at least one examined application claim is not, patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 4-13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-15 of U.S. Patent No. 6,657,155 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because forming a concave portion on a lower part of a sintered block and a declined upper surface of a concave portion would have been obvious to one of ordinary skill in the art at the time the invention was made principally in order to produce a sintered block having a desired configuration (e.g., the particular application or use of the product would determine its configuration or shape).

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***Response to Arguments***

8. Applicant's arguments with respect to claims 1 and 4-13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo B. Tentoni whose telephone number is (571) 272-1209. The examiner can normally be reached on Monday - Friday (6:30 A.M. - 3:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Leo B. Tentoni*

Leo B. Tentoni  
Primary Examiner  
Art Unit 1732

lbt